

Work plan for Fiscal Year 2007
August 31, 2006

I. Program Title: Water Acquisition Program - CVPIA Sections 3406(b)(3), (d)(2) and (g)

II. Responsible Entities:

	Agency	Staff Name	Role
Lead	USBR	Dan Meier	Program Manager
Co-Lead	USFWS	Dick Jewell	Coordinator

III. Program Objectives for FY 2007

The major Water Acquisition Program (WAP) objectives are:

- (A) To provide supplemental water supplies for refuges, referred to as Incremental Level 4, for critical wetland habitat supporting resident and migratory waterfowl, threatened and endangered species, and wetland dependent aquatic biota [CVPIA Sections 3406(b)(3) and (d)(2)].
- (B) To acquire and manage instream flows in support of the Vernalis Adaptive Management Plan (VAMP) and the San Joaquin River Agreement (SJRA) [CVPIA Sections 3406(g) and 3406(b)(3)].
- (C) To acquire water to improve spawning and rearing habitat and increase migration flows for fall-, winter- and spring-run Chinook salmon and steelhead, in support of the Anadromous Fish Restoration Plan [CVPIA Section 3406(b)(3)] and in coordination with the CALFED Environmental Water Program and Environmental Water Account.

IV. Status of the Program

In FY06, the WAP continued efforts to:

- (A). Provide supplemental refuge water supplies (Incremental Level 4) through purchases from willing sellers.

The WAP acquires Incremental Level 4 supplies from willing sellers. This typically consists of annual purchases from a variety of water districts that historically have included the San Joaquin River Exchange Contractors and Central Valley Project, Cross Valley Canal and State Water Project contractors.

In FY06, Reclamation negotiated a 5-Year Agreement with representatives of the San Joaquin River Exchange Contractors Authority (Exchange Contractors), San Luis & Delta-Mendota Water Authority and Madera Irrigation District for the annual purchase of

up to 80,000 AF of Exchange Contractors transfer water. The 5-Year Agreement accommodates water needs for Central Valley Project agricultural, municipal and industrial contractors, and California Central Valley wildlife refuges. This 5-Year Agreement promotes a cooperative relationship between the contractors and the refuges by providing cost effective and predictable water supplies for the contractors and refuges while meeting the needs of the Exchange Contractors to have a predictable market for their transfer water.

As a supplement to acquisitions, the WAP is looking at the potential for using groundwater in order to lower costs and increase reliability of providing supplemental refuge water supplies. In 2004, initial groundwater investigations were completed by the WAP to identify groundwater data needs for the Central Valley refuges that receive Incremental Level 4 water supplies. In FY06, the WAP initiated further groundwater studies at Pixley National Wildlife Refuge (NWR), East Bear NWR and Los Banos WA to determine the potential for sustained use of groundwater resources on these refuges. In FY07 additional refuge groundwater studies are proposed.

The WAP has also been involved in development of a “Refuge Water Quality Best Management Practices (BMP) Plan”. Refuge Water Quality BMPs are being developed consistent with the requirement in CALFED legislation (H.R. 2828) to develop a BMP Plan to reduce the water quality impacts of the discharges of refuges that receive federal water and discharge into the San Joaquin River. A draft report is currently being developed by the U.S. Fish and Wildlife Service (USFWS) with a final report anticipated by the end of calendar year 2006.

Significant biological benefits have been documented associated with increased water supplies with implementation of CVPIA. Prior to CVPIA, refuge management priority was fall flood-up and maintenance of adequate pond levels throughout the winter. Since 1992, supplemental refuge water supplies acquired by the WAP have provided a more consistent, reliable year round water supply to certain Central Valley refuges. Some of the benefits with implementation of CVPIA include:

- Increased frequency and acreage of irrigated moist soil food plants. The result on some refuges has been a doubling in desirable plant biomass, which equates to more high-quality, high energy food available to waterfowl.
- Improved maintenance water flows through refuge ponds to improve water quality and reduce avian disease.
- Increased critical deepwater habitat within existing riparian zones. An example of biological benefits is establishment of a rookery at Kern NWR in 1998. By 2001 there were 53 nests counted, inhabited by numerous

nesting herons, egrets and cormorants. This rookery continues to be very active every spring and summer.

- Increased spring and summer habitat to benefit water dependent wildlife such as the giant garter snake. An example of habitat improvements occurred within Grassland Resource Conservation District consisting of 14,000 acres of additional spring habitat between 1991 and 2003 and 2,400 acres of additional summer habitat between 1991 and 1998.
- Increased critical spring and summer breeding habitat for the white-faced ibis and other colonial nesting birds. At Sutter NWR the population of this species has increased from 50 in 1992 to over 15,000 in 2004, and at Kern NWR the population increased from 50 in 1992 to over 8,000 in 2005.
- Increased early fall habitat for migrating waterfowl which benefit the northern pintail and other birds arriving in the Central Valley in August to over-winter.

The WAP will continue to work with the refuges in assessing the biological benefits associated with supplemental water supplies provided under CVPIA.

(B). Provide additional instream flows in support of SJRA and VAMP.

The Water Acquisition Program has acquired/managed water from the San Joaquin River Group Authority (SJRG) and its member agencies to provide additional spring and fall fishery flows on the Stanislaus, Tuolumne, Merced, and lower San Joaquin rivers. This water is acquired/managed in support of the San Joaquin River Agreement (SJRA) and the Vernalis Adaptive Management Plan (VAMP), which is a scientifically based fishery management plan to determine the relationships between flows, exports, and other factors on fish survival in the Sacramento-San Joaquin Delta. The increased flows benefit numerous resident and anadromous fish species but are acquired primarily to benefit Chinook salmon. Central Valley Chinook salmon constitute the majority of salmon produced in California, and at times have accounted for 70% or more of the statewide commercial harvest.

The SJRA and VAMP will continue as an on-going requirement until at least 2009. An "Annual Technical Report" is issued by the SJRG consisting of a consolidated annual SJRA Operations Report and VAMP Monitoring Report. This report includes conclusions regarding biological benefits and program objectives, and recommended modifications to the VAMP experimental program implementation.

(C) Acquire water to improve spawning and rearing habitat and increase migration

flows for salmon and steelhead in support of the Anadromous Fish Restoration Plan (AFRP).

The AFRP has identified the need to augment stream flows on some tributaries to the Sacramento and San Joaquin Rivers to help meet a doubling goal of Central Valley anadromous fish identified in Section 3406 (b)(1) of CVPIA. The USFWS has prepared a Water Management Strategy (September 2006) to support future instream acquisition efforts.

A key product of this effort is a “Decision Support Model” (DSM). The DSM evaluates key factors including potential biological benefits, availability of water rights, cost of water, and potential impacts, in order to assess water acquisition priorities. As new information on watersheds and fishery needs become available, the DSM will need to be updated. This will allow the DSM decision tool to remain current and accurate. A specific timeline for implementation of instream acquisitions in support of AFRP is funding dependent.

The USFWS has also developed “Guidelines for Appraisal of Water Rights in California” (September 2006) for the purpose of providing specific guidelines for conducting water right appraisals. These guidelines will support objective and defensible valuation of water rights acquired to augment instream flows.

V. FY 2006 Accomplishments

Program Objectives	Delivery Period	Contractor	Quantity (AF)	Cost	Unit Cost per AF	Purpose
A – Incremental Level 4 Water	Jan 06 - Apr 06	Panoche Water District ¹	20,239	\$2,833,460	\$140	Contract yr 2006 Level 4 Refuge Water
A – Incremental Level 4 Water	May 06 – Feb 07	Banta Carbona Irrigation District	5,000	\$675,000	\$135	Contract yr 2006 Level 4 Refuge Water
A – Incremental Level 4 Water	May 06 – Feb 07	Patterson Irrigation District	9,000	\$1,215,000	\$135	Contract yr 2006 Level 4 Refuge Water
A – Incremental Level 4 Water	Jun 06 – Dec 06	San Joaquin River Exchange Contractors ²	49,583	\$5,291,510	\$106	Contract yr 2006 Level 4 Refuge Water
B – VAMP/SJRA	Oct 04	San Joaquin River Group Authority/Merced ID	12,500	\$212,375 (FY05 Funds)	\$17	Fall attraction flows and habitat improvement in Merced and lower SJR.
B – VAMP/SJRA	May - Jun 06	San Joaquin River Group Authority	up to 110,000	\$4,683,487 (FY05 Funds)	N/A	VAMP 31-day pulse flow at Vernalis in April-May
B – VAMP/SJRA	Apr – Aug 06	San Joaquin River Group Authority/Oakdale ID	26,000	\$1,560,000	\$60	Stanislaus River flows; lower SJR flows; water quality; any authorized New Melones purpose
B – VAMP/SJRA	May – Jun 06	San Joaquin River Group Authority	N/A	\$302,307	N/A	VAMP Monitoring

¹ Water acquisition cost is \$35 per acre foot. Entered into separate agreement with Kern-Tulare WD and Rosedale Rio-Bravo Water Storage District for the conveyance, storage and exchange of water at \$105 per acre foot.

² Agreement is a multi party 5 year agreement. The actual qty available for Level 4 and the price vary each year based on the CVP South of Delta Ag allocation.

VI. FY 2007 Tasks, Costs, Schedules and Deliverables

A. Narrative explanations of Tasks

1. Program Management. This is based on 1.7 FTE positions for Reclamation and 1.25 FTE positions for the USFWS. **Estimated Annual Cost** = \$497,601
2. Level 4 Refuge Water for FY07 (1st Quarter). No additional acquisitions of Incremental Level 4 water will be necessary during the 1st quarter of FY07; all water delivered during this period has been purchased with FY06 funds.
3. Merced I.D. SJRA Fall Flows (1st Quarter). This payment is for approximately 12,500 AF of instream flow in the Merced River in the fall months of 2006, under the SJRA. **Estimated Cost** = \$863,745 (Paid with FY06 funds of \$734,000 and FY07 funds of \$129,745.)
4. VAMP Spring Flows (2nd Quarter). San Joaquin River Group Authority delivers up to 110,000 AF for VAMP. Total payment obligation is approximately \$4,800,574. Federal share is approximately \$3,468,574. (Paid with FY06 funds of \$3,435,000 and FY07 funds of \$33,574.) State Cost Share is \$1,332,000.
5. San Joaquin River Agreement/Oakdale ID Flows (2nd Quarter). Oakdale Irrigation District (OID) delivers up to 15,000 AF at \$60 per AF under the terms of the SJRA. This water may be used for any authorized purposes of the CVP on the Stanislaus and San Joaquin Rivers. **Estimated Cost** = \$900,000.
6. San Joaquin River Agreement - Additional Flows from OID. OID may provide up to 11,000 AF at \$60 per AF under terms of the SJRA. This water represents the unused portion of OID's commitment of up to 11,000 AF for the spring pulse flow provided under VAMP. **Estimated Cost** = \$660,000
7. VAMP Double-Step Flows (2nd Quarter). Funds for this purpose are needed only if: 1) the current water year is classified as a double-step year based on the criteria given in VAMP, and 2) if meeting the VAMP flow objective requires more than 110,000 acre feet of supplemental water. If these flows are not required, all or part of these funds may become available for other CVPIA Program needs. **Estimated Cost** = \$2,800,00
8. VAMP Environmental Monitoring (2nd Quarter). This represents estimated VAMP monitoring costs. **Estimated Cost** = \$300,000 (Paid with FY06 funds.)
9. Planning. Long term planning work for Level 4 and instream flow acquisitions will continue. This may include work involving groundwater investigations,

refuge water quality BMPs, and instream acquisition priorities and procedures. There may be a need for additional technical and/or consulting support for Program staff. **Estimated Cost** = \$400,000

10. Update the DSM with new information that may be available on Central Valley watersheds and current AFRP fishery needs. This will allow the DSM I to remain current and accurate. **Estimated Cost** = \$35,000.
11. Level 4 Refuge Water Supplies (2nd, 3rd and 4th quarters). The need for Incremental Level 4 refuge water supplies for Contract Year 2007 (March 2007 through February 2008) is approximately 115,000 AF based on existing needs, conveyance capability, and ability to beneficially use supplemental water on the refuges. At an estimated cost of \$150 per AF, the acquisition cost of 115,000 AF is \$17,250,000. Based on the estimate of available funds remaining in the Fiscal Year 2007 budget after Tasks 1 through 10 are taken care of first due to prior commitments, there will be enough money to purchase approximately 65,094 AF of Incremental Level 4 refuge water. Additional funds may become available in Fiscal Year 2007 for purchases of Level 4 water from reallocated double-step funds (Task 7), and other de-obligated or realigned funds from the FY07 budget. **Estimated Cost** = \$17,250,000. **Available Funds** = \$9,764,080. **Unfunded Need** = \$7,485,920.

Note: Tasks 3, 4, 5 and 6 represent commitments made by the United States as signatory to the San Joaquin River Agreement (SJRA) which is implemented pursuant to State Water Resources Control Board Decision 1641. Tasks 6 and 7 are mutually exclusive program elements of SJRA/VAMP. If double-step flows (Task 7) are required, then OID's difference water (Task 6) is zero. Double-Step years are defined in the San Joaquin River Agreement as a function of the current and previous water year's hydrologic classification. This has a potentially significant impact on the amount of funding available for Level 4 acquisitions.

- 12 Potential Instream Flows Acquisitions. In order to meet CVPIA and AFRP goals and objectives, there is a need to increase instream flows through acquisitions (by purchase, lease, or exchange) of available water rights. **Estimated Cost** = \$1,000,000. **Available Funds** = \$0. **Unfunded Need** = \$1,000,000.

Summary of Part VI:

Total Costs for Tasks 1 through 11 Proposed for FY06 Funding: **\$23,705,920

Total Proposed Budget Funding for FY07: \$15,220,000

Total Additional Funding Needed: \$8,485,920

**The "Total Cost" amount includes VAMP double-step and the OID difference water. Both of these costs will not be incurred in the same year. If 2007 is not a double-step year and those funds are made available to WAP, the funding shortfall would be reduced by \$2,800,000. The state cost share on VAMP is generally made available to WAP early in the fiscal year which will further reduce the funding shortfall by \$1,332,000.

B. Schedule and Deliverables

#	Task	Dates		Deliverable
		Start	Comple	
3	Merced I.D. SJRA Fall Flows	Oct 06	Oct 06	Up to 12,500 AF per SJRA
4	VAMP Spring Pulse Flows	Apr 07	May 07	Up to 110,000 AF per SJRA/VAMP
5	OID additional water	Apr 07	Oct 07	Up to 15,000 AF - typically fall fish flow water provided at New Melones Reservoir to be used for habitat improvement in Stanislaus and lower San Joaquin rivers
6	OID difference water from VAMP 2007 (per SJRA)	Jul 07	Sep 07	Up to 11,000 AF after VAMP flows
7	VAMP Double-Step Flows	Apr 06	May 06	Up to 47,000 AF per SJRA
8	VAMP Environmental Monitoring	Apr 07	May 07	Report
9	Planning	Oct 06	Sep 07	Long term plan
10	DSM	Oct 06	Sep 07	Updated DSM
11	Level 4 Refuge Water Contract Year 2006	Mar 07	Sep 07	Agreements for up to 65,094 AF

Schedule and Deliverables - Additional Funding Needs

#	Task	Dates		Deliverable
		Start	Comple	
11	Level 4 Refuge Water	Mar 07	Sep 07	Agreements for up to 49,906 AF
12	Instream Flow Acquisitions	Jan 07	Sep 07	Agreement for instream flows

C. Summary of Program Costs and Funding Sources.

#	Task	Total Cost	Funding Sources	
			RF	Prop 204
1	Program Management	\$497,601	\$497,601	
3	Merced I.D. SJRA Fall Flows	\$863,745	\$863,745 ¹	
4	VAMP Spring Pulse Flows	\$4,800,574	\$3,468,574 ²	\$1,332,000
5	OID SJRA Flows	\$900,000	\$900,000	
6	Additional OID SJRA Flows	\$660,000	\$660,000	
7	VAMP Double-Step	\$2,800,000	\$2,800,000	
8	VAMP Environmental Monitoring	\$300,000	\$300,000 ³	
9	Planning	\$400,000	\$400,000	
10	DSM	\$35,000	\$35,000	
11	Level 4 Refuge Water	\$9,764,080	\$9,764,080	
12	Instream Flow Acquisitions	\$0	\$0	
	Total	\$21,021,000	\$19,689,000	\$1,332,000
	Total FY 06 Funds	\$4,469,000	\$4,469,000	0
	Total FY 07 Funds	\$16,552,000	\$15,220,000	\$1,332,000

¹FY06 funds of \$734,000 will be used

²FY06 funds of \$3,435,000 will be used

³FY06 funds will be used

D. CVPIA Program Budget

#	Task	FTE	Direct Salary and Benefits Costs	Contract Costs	Misc. Costs	Indirect Costs	Total Costs
1,2,3,5,6,9,10	Program Task (BOR)	1.66	\$158,741	\$11,853,825 ¹	\$2,530	\$90,562	\$12,105,658
4,7,8	VAMP			\$33,574 ²			\$33,574
	Monitoring	.04	\$4,029	\$0 ³	\$0	\$2,500	\$6,529
	Double-Step			\$2,800,000			\$2,800,000
1,3,5,6,9,10,11	Program Task (USFWS)	1.25	\$194,346	\$35,000	\$0	\$44,893	\$274,239
	Total by Category	2.95	\$357,116	\$14,722,399	\$2,530	\$137,955	\$15,220,000 ⁴

¹Does not include the FY06 funds of \$734,000

²Does not include the FY06 funds of \$3,435,000 and the State Cost Share of \$1,332,000

³Does not include the FY06 funds of \$300,000

⁴The \$15,220,000 total is from the president's budget and includes the following
 Section 3406(b)(3) Instream (Other) - \$2,000,000 and VAMP Doublestep \$2,800,000
 Section 3406(2) Level 4 Water Purchases - \$6,086,000
 Section 3406(g) VAMP - \$4,334,000

VII. Future Years Commitments/Actions

SJRA/VAMP is an annual commitment through December 31, 2009 to compensate members of the San Joaquin River Group Authority for providing up to 110,000 af of water to meet the VAMP flow requirements, up to 47,000 af in “double step” years, and the additional flows provided by Merced and Oakdale ID’s. Total cost in 2006 dollars was \$6,455,862 indexed through the end of the agreement.

Incremental Level 4 Refuge Water supply needs will increase incrementally in the future as refuge conveyance systems are constructed or upgraded to allow delivery of full CVPIA Level 4 water supplies. Also, the price of water is expected to increase incrementally consistent with historic trends.

There will be an increasing need to acquire water by purchase of water rights or long-term leases, to increase instream flows to benefit fish and wildlife consistent with the goals and objectives of CVPIA and the AFRP. The acquisition of water will be coordinated with the CALFED Environmental Water Program, which has similar program objectives. Additionally, as new information on watersheds and fishery needs become available, the DSM will need to be updated. This will allow the DSM decision support tool to remain current and accurate.

Table E

**DRAFT CVPIA 5-Year Budget Plan
FY 2008 – 2012
(\$ Thousands)**

Program Description and Section		FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Total (\$)
	W&RR	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$15,000
	RF	\$26,949	\$28,227	\$29,615	\$31,045	\$32,523	\$148,359
	State	\$1,332	\$1,332	\$1,332	\$1,332	\$1,332	\$6,660
	Other (identify)						
Total:		\$31,281	\$32,559	\$33,947	\$35,377	\$36,855	\$170,019

Activities by Fund:

W&RR funds are to acquire additional instream flows in support of Section 3406(b)(3) and to acquire Incremental Level 4 refuge water supplies.

RF funds are to acquire 115,000 acre feet of Incremental Level 4 refuge water supplies for San Joaquin Valley refuges estimating a \$10 per acre foot increase in cost each fiscal year. Completion of some planned conveyance facility construction projects would allow additional incremental Level 4 water to be delivered if additional funding were available to acquire this water.

RF funds also support VAMP/SJRA. VAMP/SJRA terminates in 2009 however the agreement may be extended or revised.

State funds are provided for VAMP through 2008 however there is the expectation that the State will continue to cost share.

Notes:WRR – Water and Related Resources Appropriations

RF – Restoration Fund (Section 3407)

State – State of California cost share funding

FY 2008 – 2012 These figures could significantly change in the Congressional Appropriations process. WRR Appropriations are displayed as amounts that might be reasonably appropriated each year. The annual RF budgets were estimates taking into account the three-year rolling average. All of these estimates will be adjusted annually as RF collections are realized.